

VISIT THE U.S. DEPARTMENT OF ENERGY'S DESICCANTCOOL WEB SITE



Buildings for the 21st Century

Buildings that are more energy efficient, comfortable, and affordable . . . that's the goal of DOE's Office of Building Technology, State and Community Programs (BTS). To accelerate the development and wide application of energy efficiency measures, BTS:

- Conducts R&D on technologies and concepts for energy efficiency, working closely with the building industry and with manufacturers of materials, equipment, and appliances
- Promotes energy-/money-saving opportunities to both builders and buyers of homes and commercial buildings
- Works with state and local regulatory groups to improve building codes, appliance standards, and guidelines for efficient energy use
- Provides support and grants to states and communities for deployment of energy-efficient technologies and practices.



NREL
National Renewable Energy Laboratory

Advanced Desiccant Cooling & Dehumidification Program

<http://www.nrel.gov/desiccantcool/>

NREL is a U.S. Department of Energy National Laboratory operated by Midwest Research Institute • Battelle • Bechtel

Technology Description

Introduction to the Desiccant Cooling Program

News and Events

Hot Topics:
New Study on Advanced Liquid-Desiccant Technology Development

Learn about cutting-edge desiccant cooling and dehumidification technologies, current research, industry developments, and upcoming conferences and workshops. Features of the site include:

- ➔ **News and Events** — Get information on current industry standards, efforts to establish a national certification program, and upcoming conferences, workshops, and events.
- ➔ **Hot Topics** — Read about state-of-the-art liquid-desiccant systems and how their operating costs could be about 40% lower than those for the solid-desiccant systems.
- ➔ **Technology Descriptions** — Learn the ABCs of desiccant technologies and find out how they can provide solutions for environmental, regulatory, and economic issues faced by the air-conditioning industry.
- ➔ **Introduction to DOE's Desiccant Cooling Program** — Learn about NREL's Advanced Desiccant Cooling and Dehumidification Project and facilities.
- ➔ **Quick Facts** — Learn the environmental benefits of desiccant technologies.
- ➔ **Manufacturers** — Get in touch with some of the nation's desiccant wheel manufacturers.
- ➔ **Bibliography** — Access a reference list containing hundreds of desiccant technology publications.
- ➔ **Web Site Links** — Link to other Web sites containing information about desiccant cooling and dehumidification.

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Desiccant Dehumidification Wheel Test Method and Rating Workshop Provides In-Depth Look at Industry Standards and Test Guide

Desiccant manufacturing and research representatives from across the nation attended NREL's Desiccant Dehumidification Wheel Test Method and Rating Workshop held in February at the laboratory's Thermal Test Facility in Golden, Colorado. The purpose of the workshop was to facilitate the implementation of the new Air-Conditioning and Refrigeration Institute and ASHRAE standards for desiccant wheel certification.

Workshop participants got an in-depth look at the new standards and previewed NREL's new test guide developed to help industry members meet the new standards. According to Steve Slayzak, NREL's Advanced Desiccant Cooling and Dehumidification Project Manager, the test guide provides industry members with the tricks of the trade NREL researchers learned from 12 years of testing and research. "It gives them the inside scoop on what can go wrong and how to avoid it, saving them a lot of time and money," Slayzak said.

Participants also experienced NREL's state-of-the-art test equipment during the workshop's hands-on sessions. NREL's advanced psychrometric control and measurement equipment provides users with accelerated test capabilities.



NREL hosts a Desiccant Dehumidification Wheel Test Method and Rating Workshop to support technology transfer, demonstrate new hardware, and educate industry users.

One workshop participant called the workshop "enlightening." J. Thomas Sobieski, director of Special Projects, York Airside Products Group, York International said, "Not only did it address wheel testing and rating, it also gave a very thorough overview of the desiccant market and related subjects including liquid desiccants, outside air preconditioning, heat recovery options and utility company involvement."

NREL's Desiccant Dehumidification Wheel Test Method and Rating Workshop was sponsored by the U.S. Department of Energy Office of Building Technology, the Gas Research Institute (GRI), and the Air-Conditioning and Refrigeration Institute.

Desiccant Cooling and Dehumidification Web site:

[http://www.nrel.gov/
desiccantcool/](http://www.nrel.gov/desiccantcool/)

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